

MEDICAL TIPS

BY DR. DAVID RAMEY

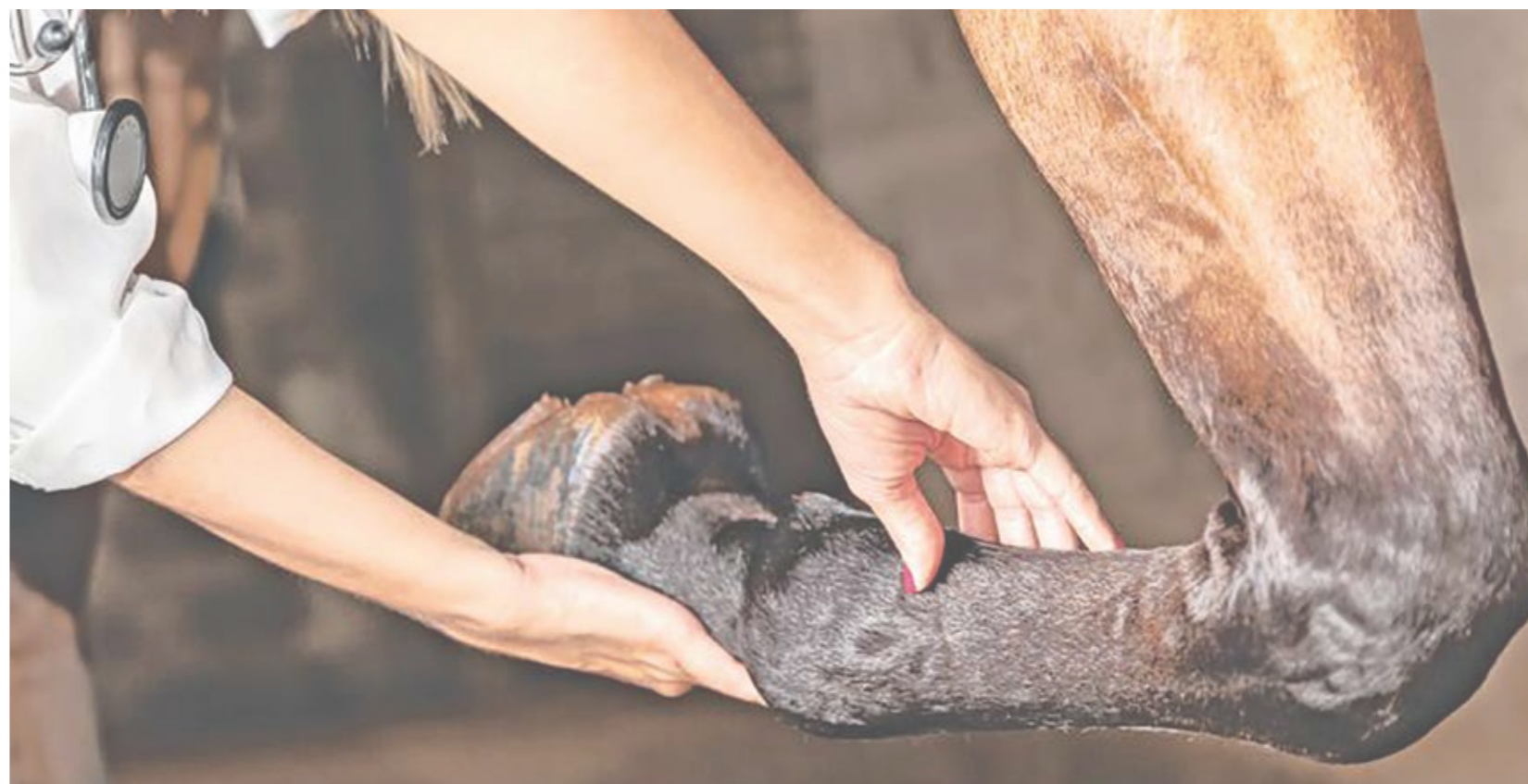


MEDICAL

THE FORELIMB FLEXION TESTS

YOU'VE DECIDED TO SELL YOUR HORSE AND THE POTENTIAL BUYER HAS SENT A VETERINARIAN TO YOUR STABLES TO PERFORM A PRE-PURCHASE EXAM OR YOU'RE THE BUYER, AND YOU'RE EXCITED TO COMPLETE YOUR PURCHASE. SO, AS YOU STAND BEAMING WITH SATISFACTION, THE VETERINARIAN PICKS UP THE HORSE'S LEFT FRONT LEG, BENDING IT AT THE FETLOCK, HE OR SHE HOLDS IT IN THE AIR FOR 60 SECONDS OR SO, RELEASES THE LIMB, AND ASKS THAT THE HORSE BE IMMEDIATELY JOGGED DOWN THE DRIVE. IN ASTONISHMENT, YOU WATCH AS THE HORSE THAT YOU'VE KNOWN – OR HOPED – TO BE SOUND MOVES OFF WITH AN OBVIOUS BOB OF THE HEAD. HE'S MOST DECIDEDLY LAME AFTER THE TEST.

WHAT HAPPENED? WHAT DOES IT MEAN?





What you have witnessed is a phenomenon that is not necessarily of the veterinarian's creation, but something that can sometimes occur following a procedure called a forelimb flexion test. In a forelimb flexion test, various joints and soft tissue structures of the lower limb are stretched and/or compressed for a brief period of time by bending the limb. Afterwards, the horse is immediately trotted off and observed for signs of lameness.

Simple, really. But it gets messy.

Forelimb flexion tests were described in Swedish veterinary literature as early as **1923**. Since then, they've become something of an integral part of the evaluation of the lame horse. But not only that, forelimb flexion tests are generally routinely included in pre-purchase evaluations of horses intended for sale.

The test is not unlike what you might experience if someone asked you to sit in a crouch for sixty seconds and then run right off. Usually – and especially if you've never had knee problems – you can run off just fine, particularly after a couple of steps. If you've never had a problem, chances are that you're fine, no matter what happens in those first couple of steps. Very occasionally, that stiffness and soreness that

you might feel could signal a problem (**such as a bad knee**).

This test used to make me confused, and to some extent, it still does. That's because I'm often not too sure what to make of the state of things when a horse takes some bad steps after a flexion test. I mean, I know I might not pass such a test. So, **who's to say that every horse should?** Because of that question, back in 1997, I did the study. It's still timely. Let me tell you about it.

In my study, I looked at fifty horses (**100 legs**) of various breeds, ages, sex, and occupation. The owners were gracious enough to let me explore my curiosity about forelimb flexion tests. The horses were from my practice, and included a wide variety of pleasure and performance horses – including some world class jumping horses – but overall, they were a representative sampling of all of the horses that were in my practice.

I took a lameness history of all of the horses in the study; I watched them trot and lunge on hard ground, and I felt their legs for abnormal swellings or areas of soreness. If a client's horse was lame, or showed some obvious physical abnormality, I didn't use him – I just

wanted to study sound horses. And then I did two tests – a **"normal" (for me)** flexion test, and a test that was as hard as I could flex the leg without the horse going up in the air and trying to kill me (**for my study, I held the horse's leg up in the air for 60 seconds, but there's no agreement on the "proper" amount of time – which is another problem**). I recorded the responses. In addition, I took X-rays all of the lower legs of the horses.

I examined the horses again 60 days later. If an individual horse incurred some lameness in the 60-day period following the initial examination, the lameness was correlated with clinical, flexion test, and X-rays findings.

Here's what I found.

I found that forelimb flexion tests couldn't tell me anything about the future of a sound horse. I could make every single horse lame with a hard-enough flexion test, with the exception of one particularly annoying Arabian gelding who was always trying to bite me (**no Arabian jokes, please**).

Horses that had "something" on their X-rays weren't any more likely to be lame after a "normal" flexion test than horses that had

"clean" X-rays.

Horses that had positive "normal" flexion tests weren't any more likely to be lame 60 days out, either (**those horses that were lame mostly had things like hoof abscesses, which nobody could have predicted anyway**).

If you follow a group of horses for 60 days, there's a decent chance that a few of them might experience an episode of lameness. Who knew?

So, **what did I conclude?** Well, I said – right there in front of an entire meeting of the American Association of Equine Practitioners – which I didn't think that it was a good idea to rely on forelimb flexion tests to make a diagnosis of some current or future problem without some other supporting sign. I said I didn't think that they were very sensitive, or that they were very specific. And I said that I didn't think it was a good idea to turn a horse down based solely on a response to a forelimb flexion test, either.

Which caused a bit of a kerfuffle, but I still feel the same way. That is:

Flexion tests appear to also have no predictive value for the occurrence of forelimb lameness for at least 60 days after you do the flexion test.

Otherwise stated, if a previously sound horse goes lame after a flexion test, the lameness could not have been reasonably predicted by forelimb flexion.

Some folks apparently feel that there is a potential for hurting a horse with forelimb flexion tests. They may be concerned that by flexing the joint, one could apply sufficient stress to the tissues to injure them. I couldn't find any sign of such a thing in the horses I looked at, and I flexed them really hard. They did a study on flexion tests in Belgium a couple of decades back, in which horses were subjected to as many as six flexion tests a week, and that didn't cause any problems for the horses either.

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HORSE EMOTIONS



I'VE BEEN ASKED A COUPLE OF TIMES IF I THINK THAT HORSES HAVE EMOTIONS. PEOPLE HAVE WONDERED ABOUT ANIMAL EMOTIONS FOR A LONG TIME, FOR EXAMPLE, CHARLES DARWIN COMPARED FACIAL EXPRESSIONS IN HUMANS TO THOSE IN ANIMALS BACK IN THE 1800'S. THAT SAID, IT MAKES ME SOMEWHAT EMOTIONAL TO LEARN THAT THERE ARE AT LEAST A FEW PEOPLE OUT THERE INTERESTED ENOUGH IN MY OPINION TO ASK.



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If you have a horse, or work around them, it's pretty easy to come up with a convincing answer to the question. For example, when asked if your horse loves you, you might say, "Of course – my horse loves me. That's why he nickers when he sees me! **(No, it is not the carrots.)** For some people, the answer is so obvious that they really won't see a need for this page. For them, if you ask, **"Do horses have emotions?"** the answer is simple, and emphatic. **"Yes!!!"**

But I think it's more complicated than that, and especially because there are so many emotions. **Does a horse feel each and every one of them?** It's interesting to consider.

My personal favorite is, **"My horse hates men."** This one is usually delivered with a straight face, and generally right before I'm supposed to engage in some procedure that might be unpleasant **(for the horse)**. Nothing like a bit of an earnest and somewhat terrified warning to get things to a great start.

Far be it for me to suppose that the persistent drumbeat of, **"Easy, easy, it'll be OK,"** the anxious look, or the incessant jerking of an almost palsied lead rope has anything to do with raising the horse's level of apprehension; it's gotta be me **(and maybe the needle in my hand)**. Of course, when I do manage to get my work done around the man-hating horse, and he's behaved like a gentleman, it's always, and **"I can't believe how good he was"**. I am still waiting for the, **"Wow, Dr. R., you must be some sort of genius at handling horses!"** Sometimes, you just can't win, but I digress.

All kidding aside, the question is actually a bit complex. There may be lots of opinions but there really aren't any answers in the scientific literature. I asked the question as to whether horses have emotions to an instructor and researcher in equine behavior, and she was unaware of any papers regarding **"emotion"** in horses. It would be a difficult area to research – equine cognition and equine

personality are tough enough to study, and emotion would be almost impossible. That said, the term **"emotionality"** is often used in the literature and texts on horse behavior, but it refers more to personality, that is such things as the repeatability of responses to novel or unpleasant stimuli, or the ease of learning tasks.

There's no doubt that horses have behaviors to which people input emotions. But these interpretations may or not be an accurate reflection of what's actually going on inside the horse's head. Of course, this differs from evaluating emotions in humans because... because... hmm... I'll have to work on that one. Nevertheless, in trying to determine if horses have emotions, we are limited both by our own perspective but perhaps more importantly, by language. We can only use words that describe human emotions to describe the sensations of animals. When people use words like **"love"** or **"anger"** or **"fear"** they describe a wide range of actual emotion and thought. Just as

each human perceives the world differently; **it's entirely likely that animals perceive the world differently from people.** Therefore, our ideas regarding the sensations that horses experience – ideas that are based on our own experiences, and then projected on horses – may be inaccurate.

I think that it's interesting that it's been recently shown that horses apparently produce different types of vocalizations in negative and positive contexts. I think that most people that have spent some times around horses have some sense of that. Otherwise stated, different whinnies appear to have different meanings, and can evoke certain behaviors **(e.g., anxiety)**. But that appears to be more of a communication thing.

Scientists have also looked at eye wrinkling to see if the eyes are really a mirror of the horse's soul.

ASIDE: Here's the whole quote: **"The eyes are the mirror of the soul and reflect**

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everything that seems to be hidden; and like a mirror, they also reflect the person looking into them. That quote is attributed to Brazilian author Paulo Coelho, but the sentiment appears to be a lot older.

Anyway, researchers have recently investigated whether variations in the expression of eye wrinkles caused by contraction of the inner eyebrow raiser reflects emotions. They confronted horses with positive and negative conditions and tried to bring about positive and negative emotional states, figuring that negative emotions would increase eye wrinkles **(and positive ones would reduce them)**. The results weren't consistent, but eye wrinkling did relax during grooming, and increase during food competition ; Interesting, but not conclusive.

It does seem that horses can recognize emotions in people. They seem to be able to distinguish between positive and negative facial expressions. That's probably not that big of a surprise to most people, either, but it does give you something to keep in mind when you

are approaching your horse. They certainly do feed off of – and appear to recognize – certain emotions in people.

So, **“Do horses experience sensations of fear, love, hate, loneliness, etc.?”** Personally, I think so, at least on some level. **“Are these the “same” feelings that people have?”** I have no idea, but I'm inclined to think not. Regardless, I'm pretty sure that it's a question that would be very difficult to answer. Plus, even if we got a confirmed, scientific answer, people would most likely discount it anyway if it didn't agree with what they already thought **(“What, horses don't love? Well, I don't care what anyone says, my horse loves me.”)**

But if you ask me what I think about your horse, I'm not falling into that trap. You're never going to hear me saying that your horse doesn't love you; **what purpose would that serve?** And if you tell me that your horse hates me, I'm really going to pay attention, no matter what the research says.

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